

REMARKS

Claims 1-20 are all the claims presently pending in the application. Claims 1-6 and 8-20 are amended to more clearly define the invention. Claims 1, 12-13, and 20 are independent.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicant also notes that, notwithstanding any claim amendments herein or later during prosecution, Applicant's intent is to encompass equivalents of all claim elements.

Claims 1, 9, 11, 13, and 18-19 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by the Horii et al. reference. Claims 1-5, 10-16, 18, and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the Ouchi et al. reference. Claims 6-8 and 17 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the Ouchi et al. reference in view of the Kubo et al. reference.

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as defined by, for example, independent claim 1 is directed to a portable communication apparatus that includes an image-capturing section for capturing an image depending on an operation of a shutter key and for sensing images in real-time, a display that includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame, and a character recognition section for recognizing a character from a captured image.

Conventional portable communication devices have included image capturing devices and user-input devices, such as, for example, a number pad, but have not been able to input data using the image capturing device.

The present invention enables the input of data using an image capturing device.

Further, the present invention includes a display that includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the

reference frame. In this manner, the present invention improves the performance of a character recognizer by ensuring that characters within a captured image are approximately of an optimum size.

II. THE 35 U.S.C. § 101 REJECTION

The Examiner alleges that claim 20 is non-statutory. While Applicant submits that the subject matter of claim 20 is statutory, to speed prosecution claim 20 has been amended in accordance with Examiner Rosario's very helpful suggestions.

In view of the foregoing, the Examiner is respectfully requested to withdraw this rejection.

III. THE PRIOR ART REJECTIONS

A. The Horii et al. reference

Regarding the rejection of claims 1, 9, 11, 13, and 18-19, the Examiner alleges that the Horii et al. reference teaches the claimed invention. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by the Horii et al. reference.

None of the applied references teaches or suggests the features of the claimed invention including a display that includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame. As explained above, these features are important for improving the performance of a character recognizer by ensuring that characters within a captured image are approximately of an optimum size.

The Horii et al. reference appears to disclose a mobile phone that includes a camera 116 and which may perform character recognition from an image. For example, the Horii et al. reference appears to disclose capturing a phone list from a sheet of paper 401, converting the image into phone number reading data and displaying that data on a display 404. ([0054], Fig 6A).

The Horii et al. reference also appears to disclose using the display as a viewfinder to show an image before being captured ([0074], Figure 8B).

However the Horii et al. reference does not teach or suggest that the display 404 includes a viewfinder display that displays the real-time sensed images and that includes a

reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame.

The viewfinder display 999 of the Horii et al. reference does not include any reference frame to indicate a predetermined success rate for a character positioned within the reference frame.

Therefore, the mobile telephone that is disclosed by the Horii et al. reference clearly suffers from the problems which are solved by the present invention. The telephone of the Horii et al. reference does not provide any guidance as to an optimal size of characters within a viewfinder display that would improve character recognition.

In stark contrast, the claimed invention includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame. In this manner, the present invention improves the performance of a character recognizer by ensuring that characters within a captured image are approximately of an optimum size.

Therefore, the Horii et al. reference does not teach or suggest each and every element of the claimed invention and the Examiner is respectfully requested to withdraw this rejection of claims 1, 9, 11, 13, and 18-19.

B. The Ouchi et al. reference

Regarding the rejection of claims 1-5, 10-16, 18, and 20, the Examiner alleges that the Ouchi et al. reference teaches the claimed invention. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by the Ouchi et al. reference.

None of the applied references teaches or suggests the features of the claimed invention including a display that includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame. As explained above, these features are important for improving the performance of a character recognizer by ensuring that characters within a captured image are approximately of an optimum size.

The Ouchi et al. reference discloses a multimedia information collection device. The collection device includes a camera and a character recognition unit 6 that recognizes characters in a captured image.

However the Ouchi et al. reference does not teach or suggest that a display that includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame.

The Examiner refers to Figure 4, number 41 in an attempt to allege that the Ouchi et al. reference discloses a reference frame having a size which provides a sufficiently high rate for character recognition (Office Action, page 6). However, the Ouchi et al. reference discloses a display of a captured image and the placement of a square 41 on the captured image to indicate to the device which portion of the captured image should be analyzed for the purpose of character recognition.

The square 41 is sized and positioned by a user and has absolutely no relevance to any optimum size for a character that would improve character recognition. To the contrary, the size of the characters that are displayed are permanently fixed because the image is already captured.

The Ouchi et al. reference does not provide any guidance at all for ensuring that the characters which are captured are of an appropriate size. Therefore, the mobile telephone that is disclosed by the Ouchi et al. reference clearly suffers from the problems which are solved by the present invention. The telephone of the Ouchi et al. reference does not provide any guidance as to an optimal size of characters within a viewfinder display that would improve character recognition.

In stark contrast, the claimed invention includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame. In this manner, the present invention improves the performance of a character recognizer by ensuring that characters within a captured image are approximately of an optimum size.

Therefore, the Ouchi et al. reference does not teach or suggest each and every element of the claimed invention and the Examiner is respectfully requested to withdraw this rejection of claims 1-5, 10-16, 18, and 20.

C. The Ouchi et al. reference in view of the Kubo et al. reference

Regarding the rejection of claims 6-8 and 17, the Examiner alleges that the Kubo et al. reference would have been combined with the Ouchi et al. reference to form the claimed

invention. Applicant submits, however, that these references would not have been combined and, even if combined, the combination would not teach or suggest each and every element of the claimed invention.

None of the applied references teaches or suggests the features of the claimed invention including a display that includes a viewfinder display that displays the real-time sensed images and that includes a reference frame that indicates a predetermined success rate for character recognition for a character positioned within the reference frame. These features are important for improving the performance of a character recognizer by ensuring that characters within a captured image are approximately of an optimum size.

As explained above, the Ouchi et al. reference does not teach or suggest these features.

The Kubo et al. reference does not remedy the deficiencies of the Ouchi et al. reference.

The Kubo et al. reference discloses a photographing apparatus (“camera”) that includes two image sensors. The first sensor having a smaller area than a second sensor. The first sensor is used to provide a preview image because the smaller size results in a smaller amount of data that must be transferred to a display device and which, therefore, reduces any delay between the sensing of the image and the display of the image. The second sensor has a higher resolution and is used with the data from the first sensor to generate a composite image that will be stored as a captured image.

The Kubo et al. reference does not teach or suggest anything at all regarding any reference frame in a viewfinder display at all which is related to an indication of a predetermined character recognition success rate as claimed.

Indeed, the Examiner does not allege that the Kubo et al. reference discloses these features.

Moreover, Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

The Ouchi et al. is concerned with the problem of automatically arranging, editing, extracting and relating various kinds of multimedia information and to compose a multimedia database. (Col. 1, lines 46 – 50).

In stark contrast, the Kubo et al. reference is concerned with the completely different

and unrelated problem of providing a high quality image without requiring a large-size image sensor. (Col. 1, lines 64 – 67).

One of ordinary skill in the art who was concerned with the problem of automatically arranging, editing, extracting and relating various kinds of multimedia information and to compose a multimedia database, as the Ouchi et al. reference is concerned, would not have referred to the Kubo et al. reference, and vice-versa, because the Kubo et al. reference is concerned with the completely different and unrelated problem of providing a high quality image without requiring a large-size image sensor. Thus, these references would not have been combined.

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 6-8 and 17.

IV. FORMAL MATTERS AND CONCLUSION


In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1-20, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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